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Inventor: Thomas W. Sederberg  
Contact: Steve M. Perry  
Telephone: (801) 566-6633  
Docket No. 22477

1/25

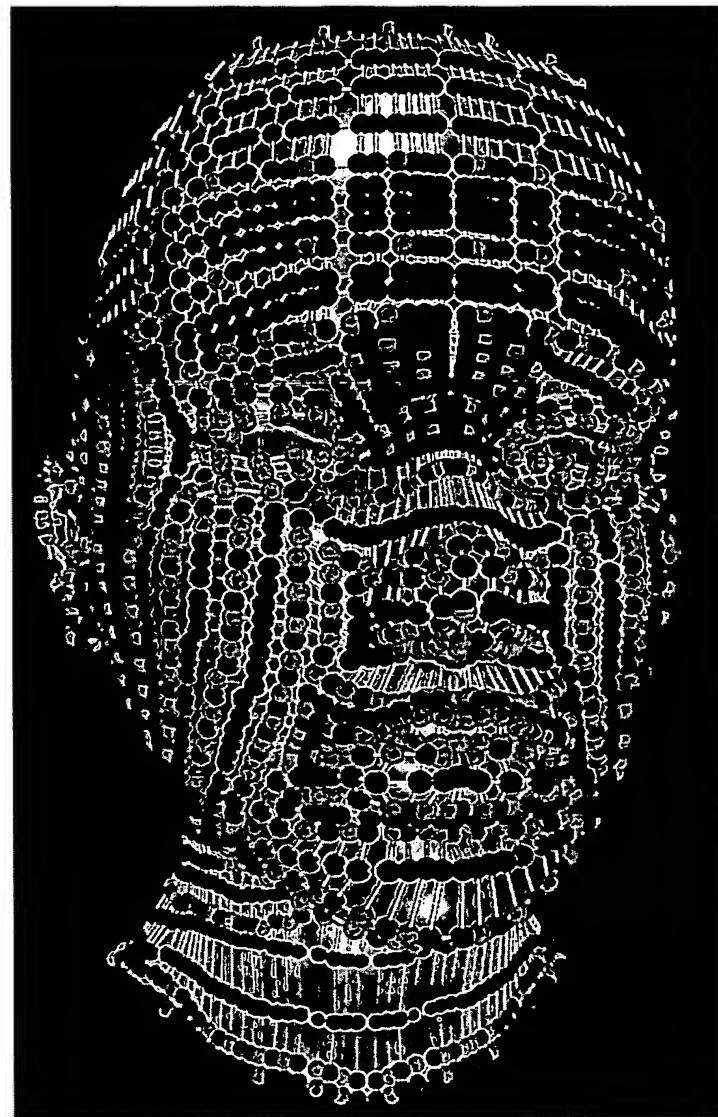


FIG. 1

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Docket No. 22477

2/25

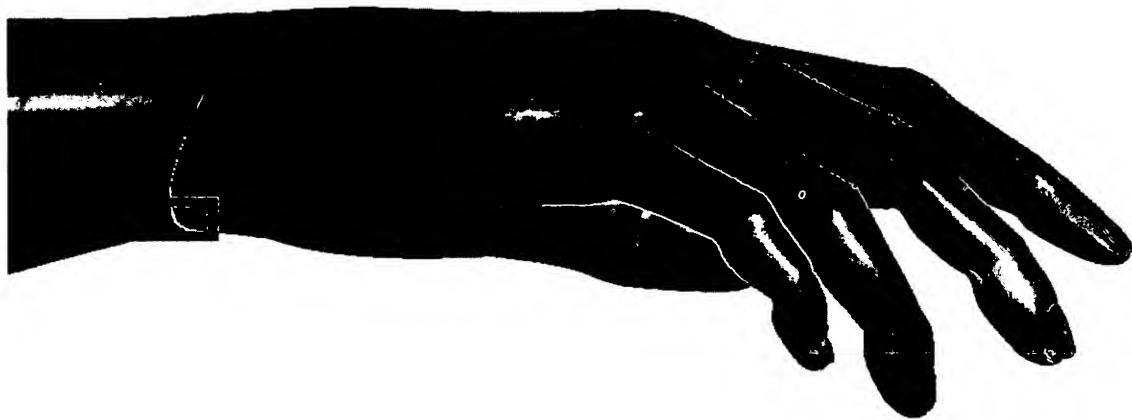


FIG. 2

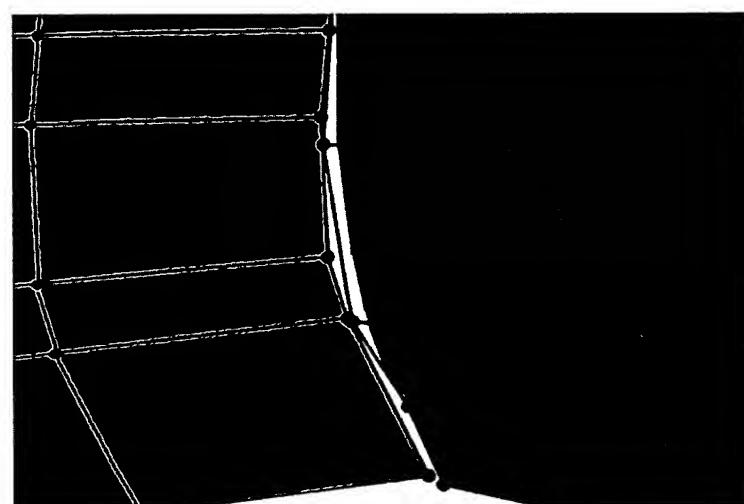


FIG. 3

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Docket No. 22477

3/25

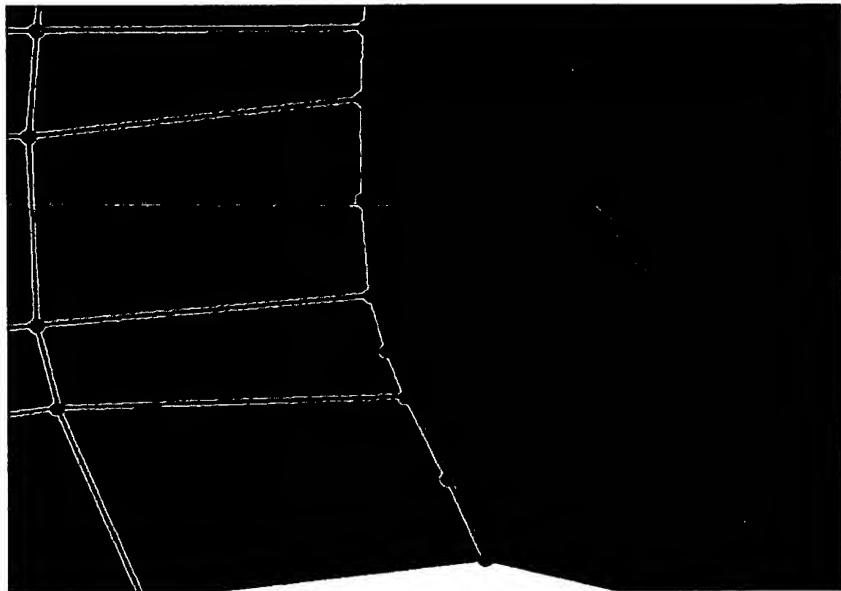


FIG. 4

4/25

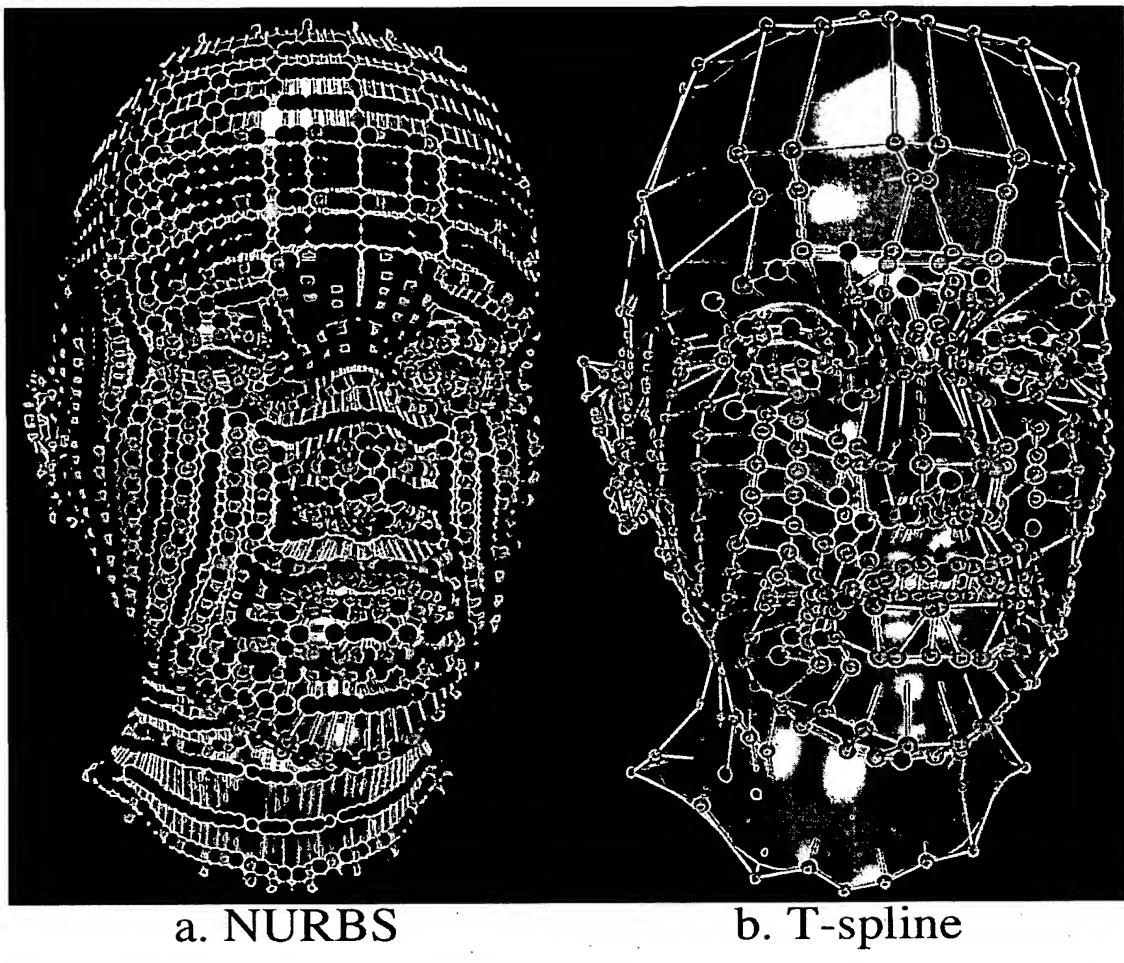


FIG. 5

Inventor: Thomas W. Sederberg  
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Docket No. 22477

5/25

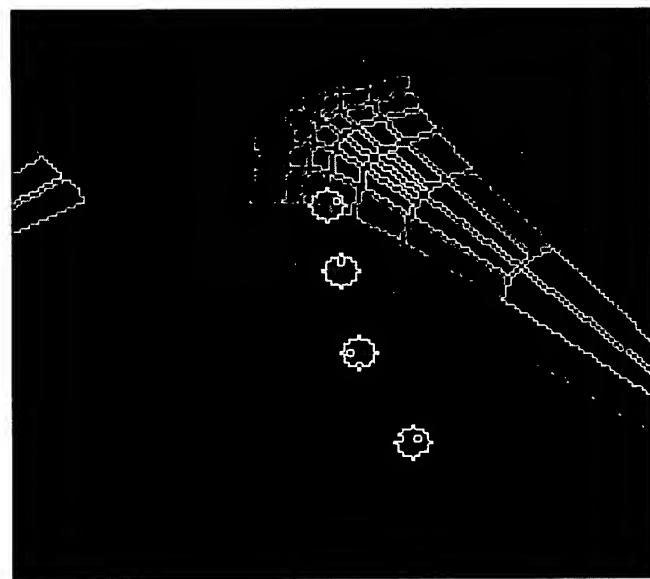
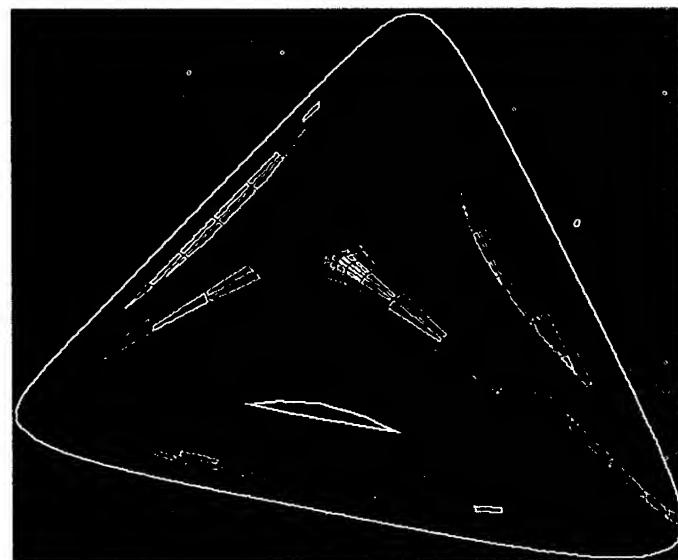


FIG. 6

6/25

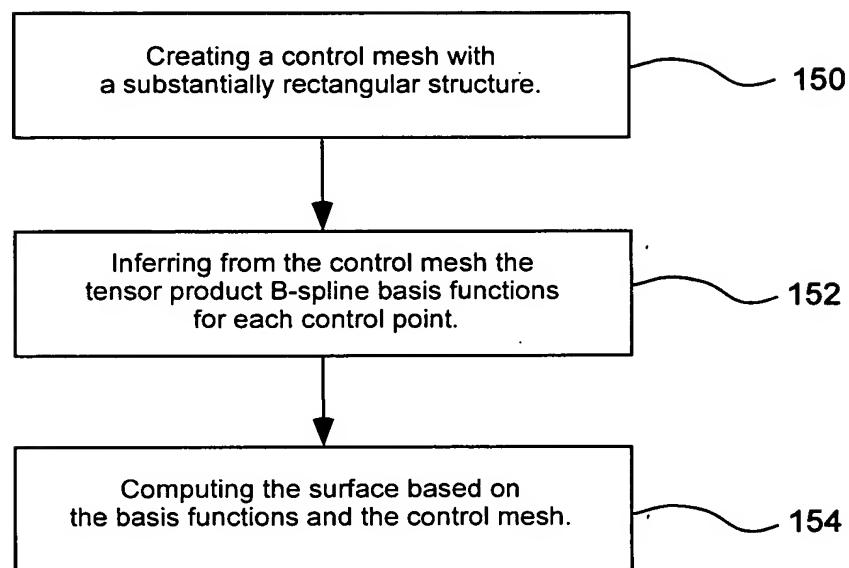
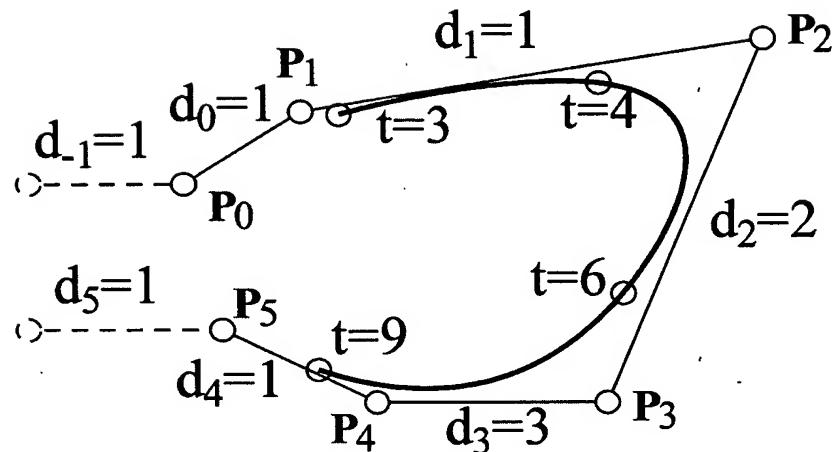


FIG. 7

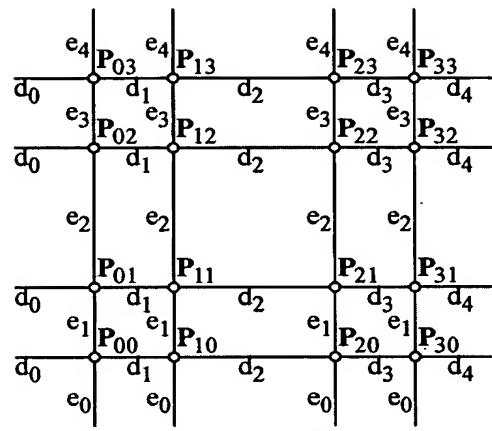
7/25



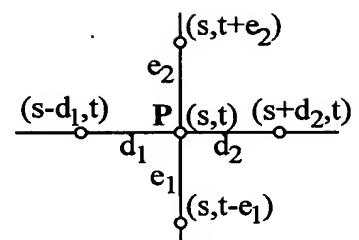
Knot Vector = [1,2,3,4,6,9,10,11]

FIG. 8

8/25



a. Bicubic patch



b. Knot coordinates

P has polar label  
 $f(s-d_1, s, s+d_2; t-e_1, t, t+e_2)$

FIG. 9

9/25

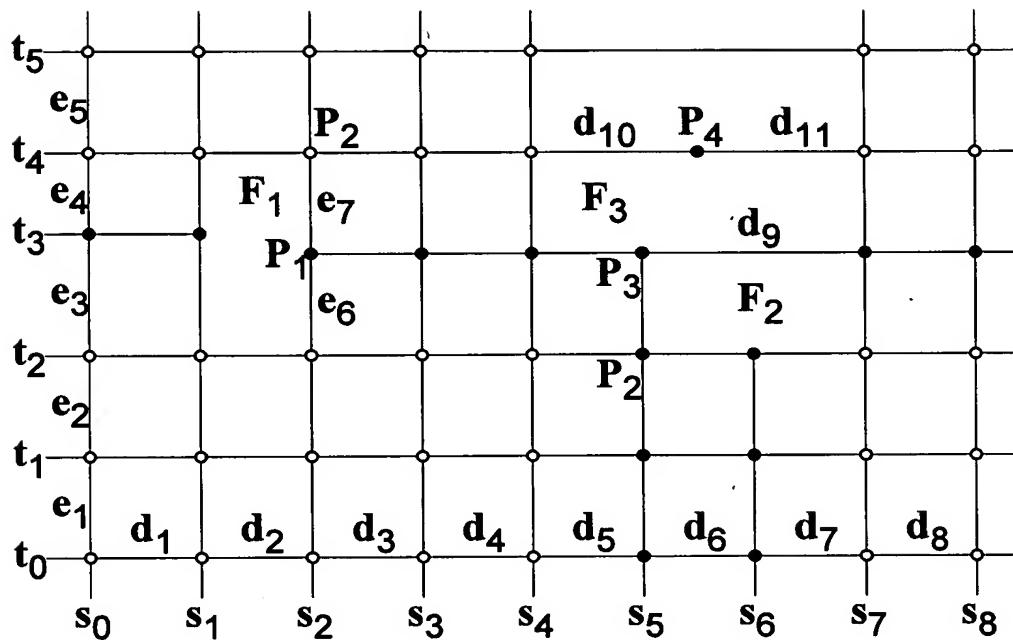


FIG. 10

10/25

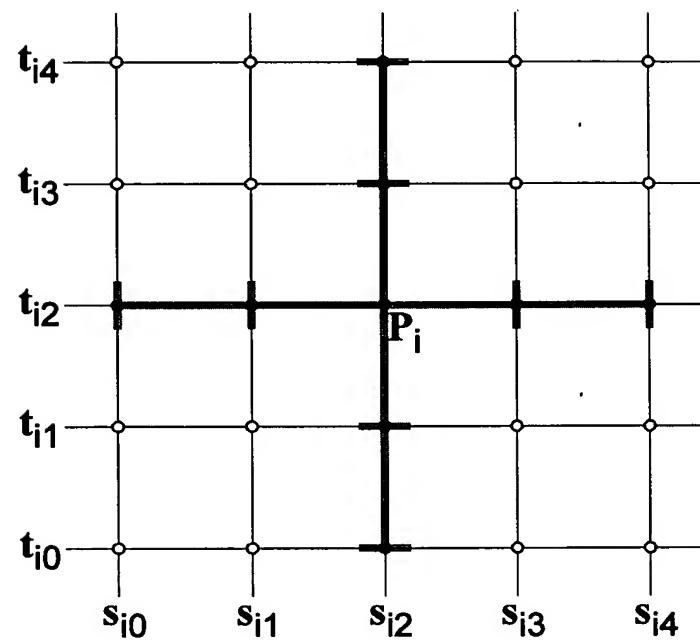
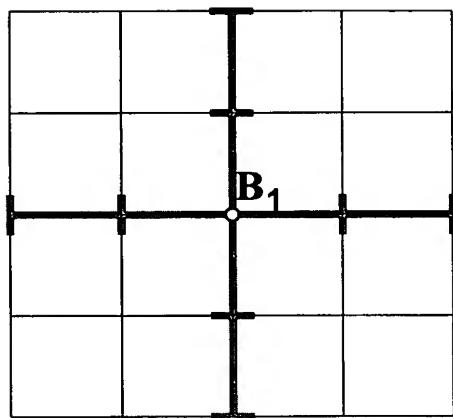
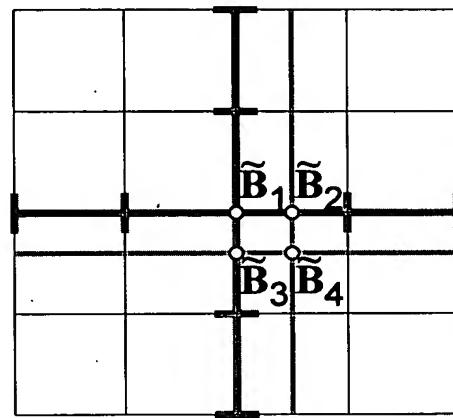


FIG. 11

11/25



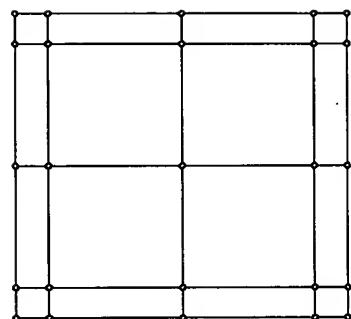
a.



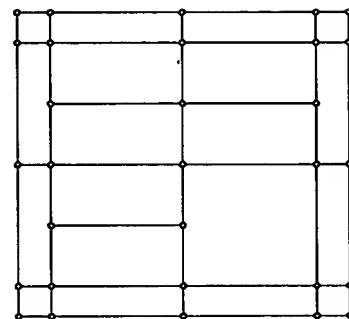
b.

FIG. 12

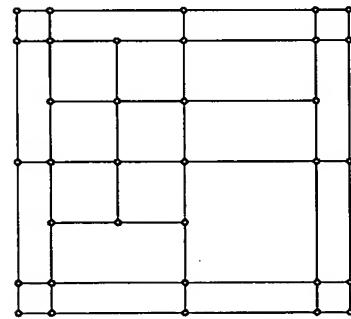
12/25



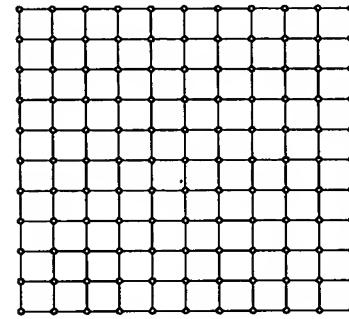
a.  $S_1$



b.  $S_2$



c.  $S_3$



d.  $S_n$

FIG. 13

13/25

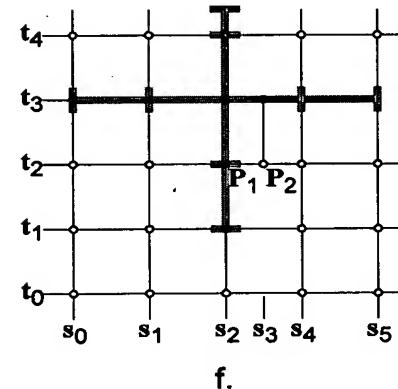
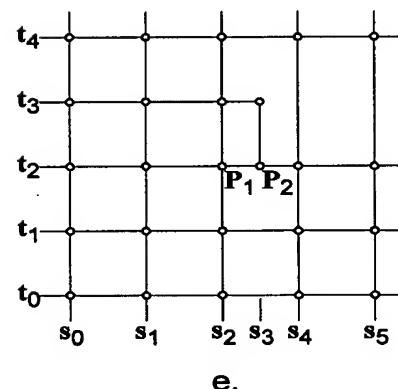
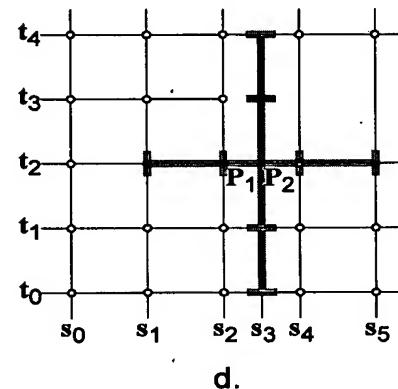
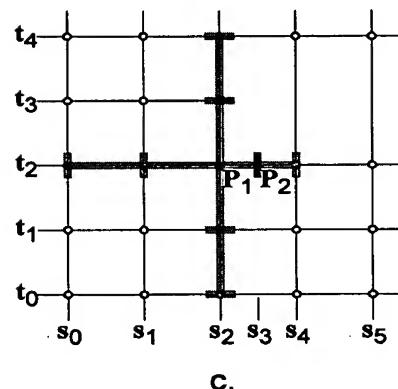
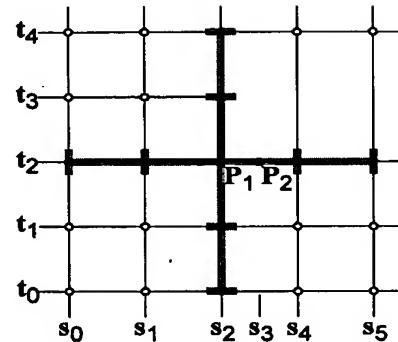
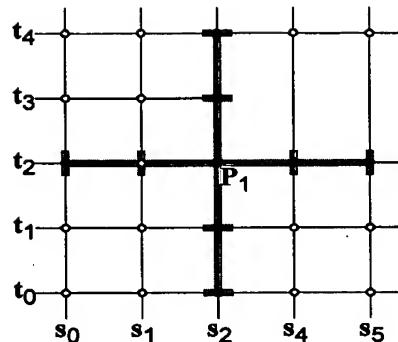


FIG. 14

14/25

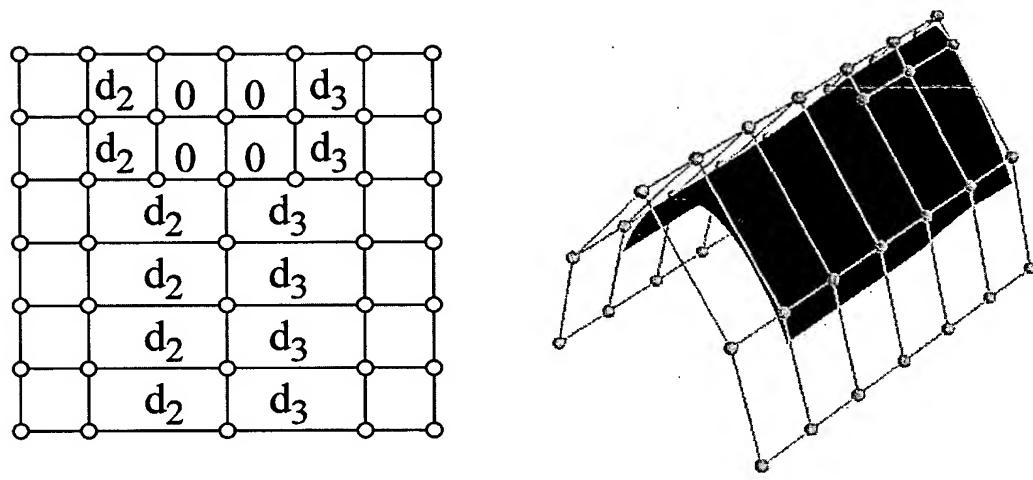


FIG. 15

15/25

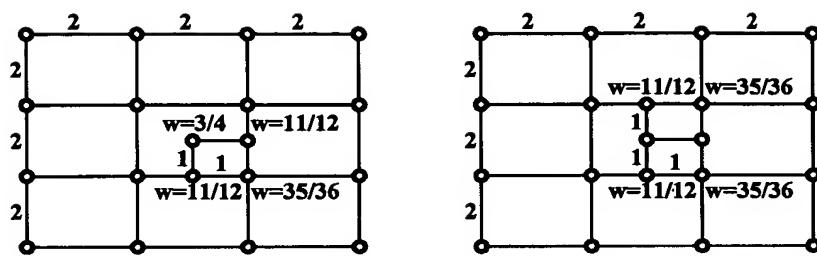


FIG. 16

16/25

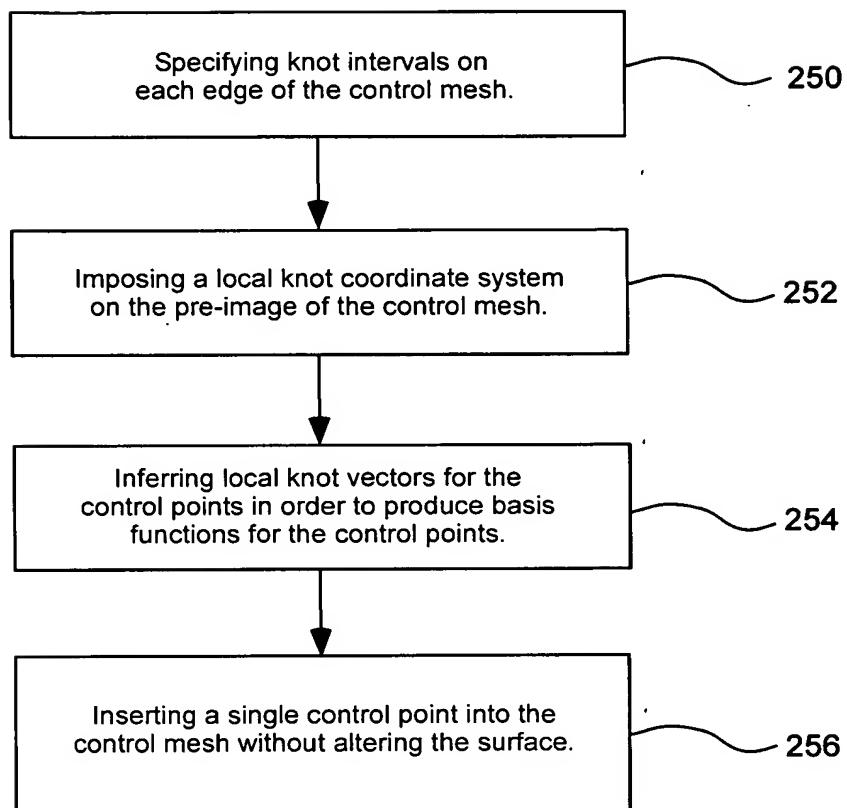


FIG. 17

17/25

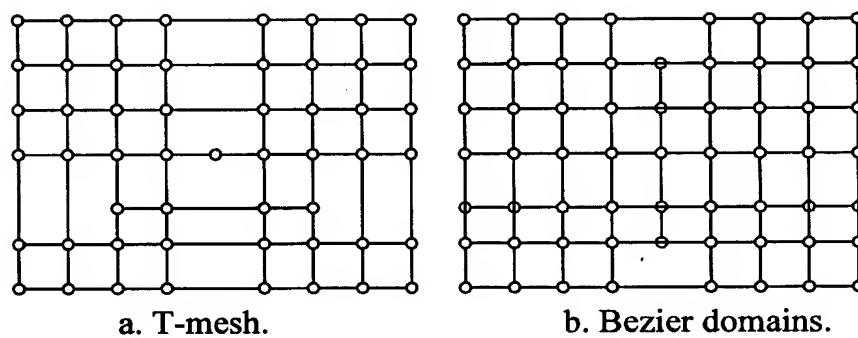
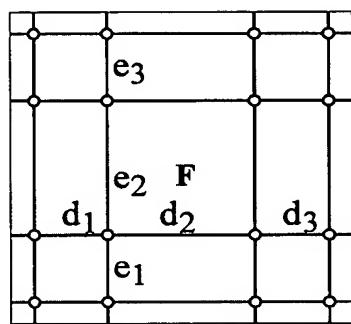
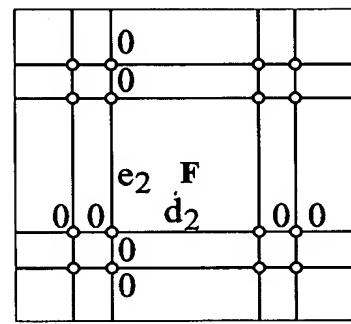


FIG. 18

18/25



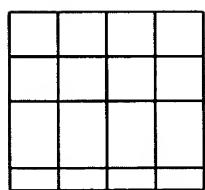
a.



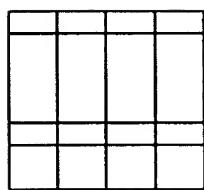
b.

FIG. 19

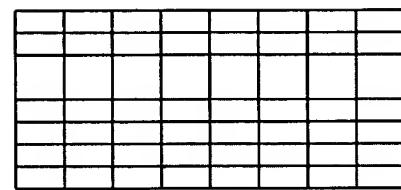
19/25



a. Patch 1



b. Patch 2



c. Merge of both patches

FIG. 20

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Docket No. 22477

20/25

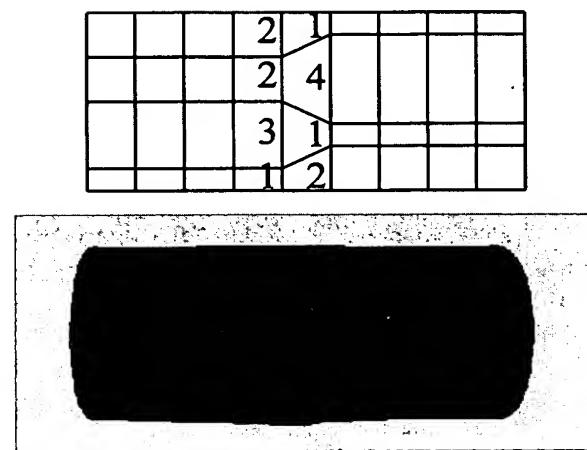
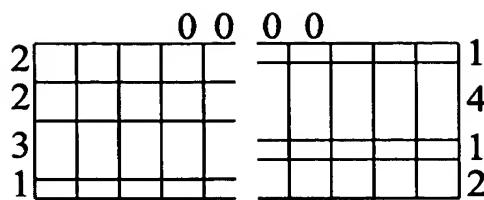
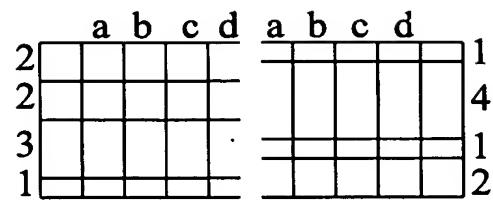


FIG. 21

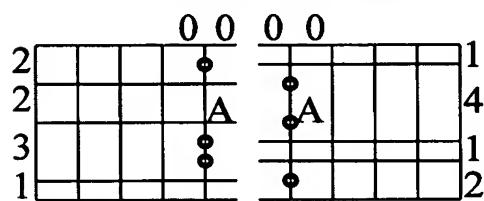
21/25



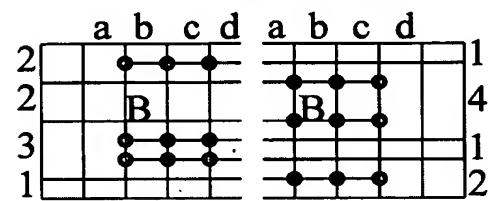
Initial control grids



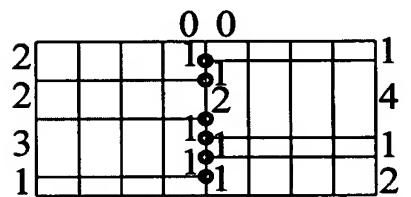
Initial control grids



Insert control points

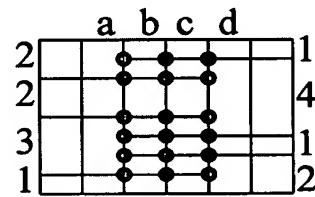


Insert control points



Merge as T-spline

a.  $C^0$  merge



Merge as T-spline

b.  $C^2$  merge

FIG. 22

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Docket No. 22477

22/25

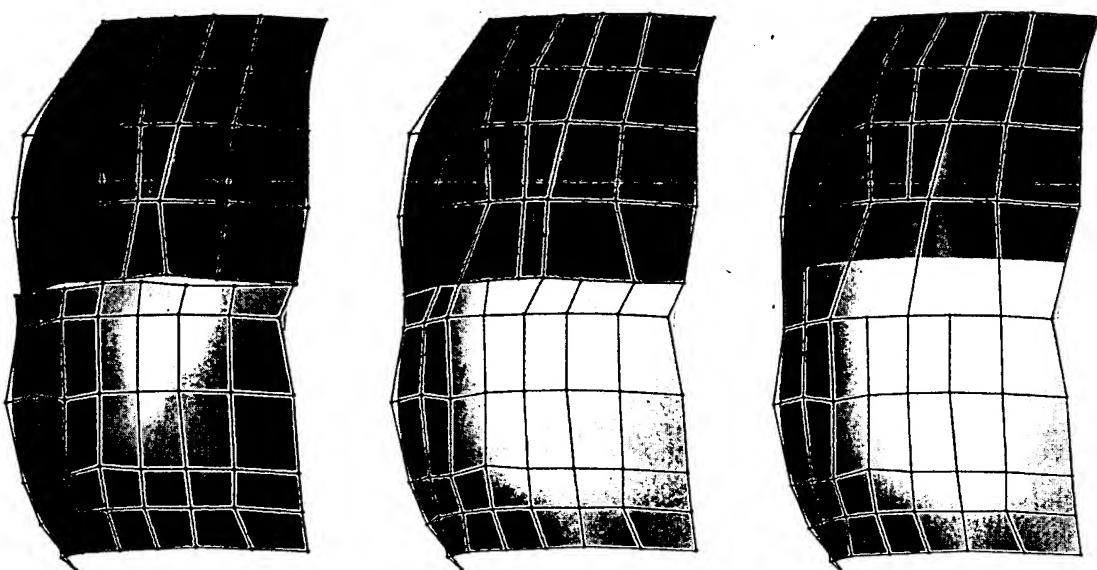


FIG. 23

23/25

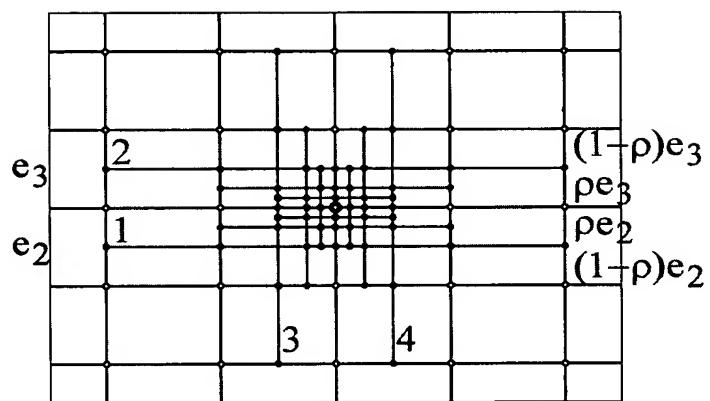


FIG. 24

24/25

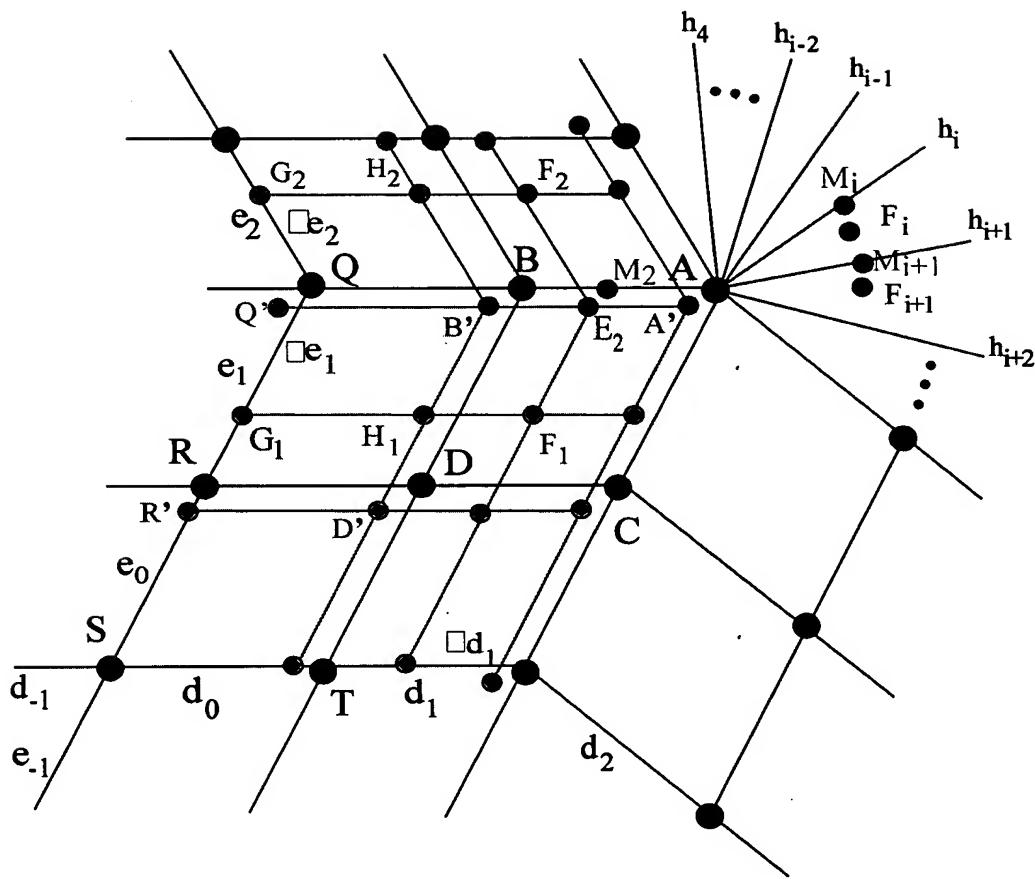


FIG. 25

25/25

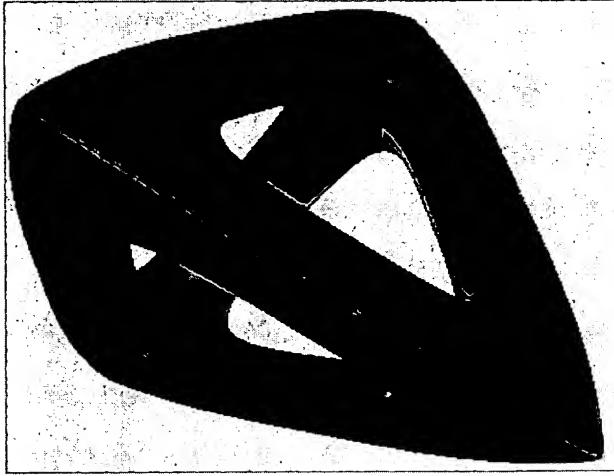
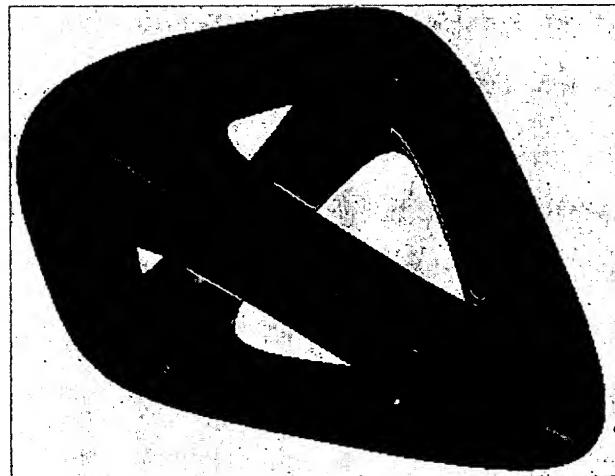
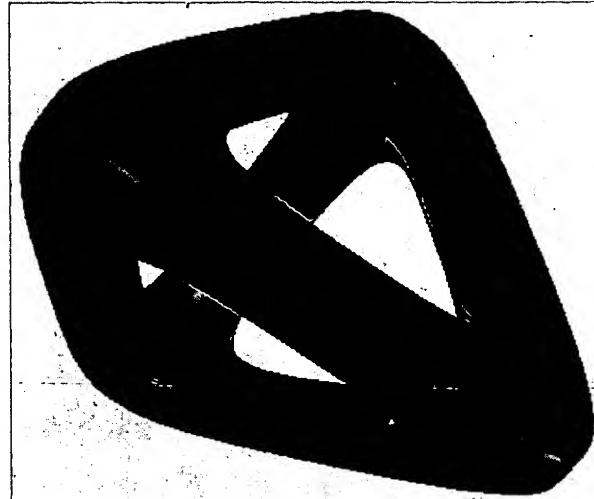
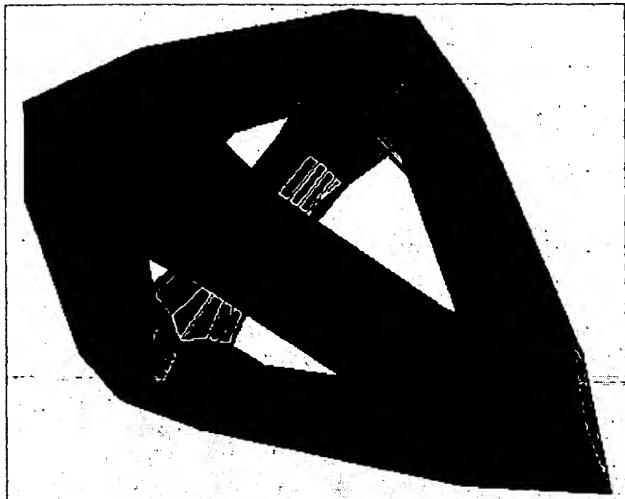


FIG. 26